
NEW RESULTS FROM THE SEARCH FOR NEUTRINOLESS DOUBLE BETA DECAY WITH ENRICHED ^{76}Ge IN GRAN SASSO

Hans Volker Klapdor-Kleingrothaus¹, Irina V. Krivosheina², Alexander Dietz¹,
Oleg Chkvorets¹

¹ *Max-Planck-Institut fuer Kernphysik, HEIDELBERG*

² *Max-Planck-Institut fuer Kernphysik, HEIDELBERG and Radiophysics Research
Institute, N-Novgorod*

The HEIDELBERG-MOSCOW Double-Beta-Decay experiment in GRAN SASSO has collected data in the period August 1990 - 2003. The measurement and the analysis of the data is presented. The collected statistics is 71.7 kg y. The background achieved in the energy region of the Q value for double beta decay is 0.11 events/kg y keV. The two-neutrino accompanied half-life is determined on the basis of more than 100 000 events. The confidence level for the neutrinoless signal has been improved.